

U.S. Patent Application Serial No. 09/029,608

said external connection protruding electrodes forming a bump,
said bump having a height larger than a height of said protruding electrode for a part thereof
protruding beyond said resin layer.

110. (Twice Amended) The semiconductor device as claimed in claim 109, wherein both a
side portion of the resin layer and a side portion of the semiconductor are respectively exposed.

111. (Twice Amended) A semiconductor device comprising:
a semiconductor element having a surface on which protruding electrodes having convex end
portions are formed;

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a resin layer formed on the surface of the semiconductor element so as to seal the protruding
electrodes except the convex end portions thereof; and

external connection protruding electrodes provided to the convex end portions of the
protruding electrodes that protrude from the resin layer,

said external connection protruding electrodes forming a bump,
said bump having a height larger than a height of said protruding electrode for a part thereof
protruding beyond said resin layer.

112. (Amended) The semiconductor device as claimed in claim 111, wherein both of a side
portion of the resin layer and a side portion of the semiconductor element are respectively exposed.

115. (Twice Amended) A semiconductor device comprising :

a semiconductor element having a surface on which electrode pads connected to an internal part of the semiconductor element and protruding electrodes to be connected to an external part are formed;

lead lines each connecting one of the electrode pads and one of the protruding electrodes so that the protruding electrodes and the internal pad are connected through the lead lines; and

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II a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof,

the protruding electrodes having a core portion and an electrically conductive film formed on a surface of the core portion,

the core portions of the protruding electrodes are directly formed on the lead lines,

wherein the core portion comprises an elastic resin.

119. (Twice Amended) A semiconductor device comprising:

I² a semiconductor element having a surface on which electrode pads connected to an internal part of the semiconductor element and protruding electrodes to be connected to an external part are formed;

lead lines each connecting one of the electrode pads and one of the protruding electrodes so that the protruding electrodes and the internal part are connected through the lead lines;

a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof; and

external connection protruding electrodes provided to the end portions of the protruding electrodes that protrude from the resin layer,

the protruding electrodes having a core portion and an electrically conductive film formed

on a surface of the core portion,

the core portions of the protruding electrodes are directly formed on the lead lines,

wherein the core portion comprises an elastic resin.

123. (Twice Amended) A semiconductor device as claimed in claim 127

wherein a part of a side portion of the semiconductor element being covered with the resin

layer,

a part of a side portion of said semiconductor elements being exposed.

127. (Amended) A semiconductor device comprising:

a semiconductor element having a surface on which protruding electrodes are formed; and

a compression-molded resin layer formed on the surface of the semiconductor element so as

to seal the protruding electrodes except end portions thereof,

wherein the compression-molded resin layer and the semiconductor element have surfaces defined by cutting using a dicer.

Please add new claims 132-135 as follows:

132. (New) A semiconductor device characterized by comprising:

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a semiconductor element having protruding electrodes formed on a surface thereof;

a first resin layer that is formed on the surface of the semiconductor element and seals the protruding electrodes except for ends thereof; and

a second resin layer provided so as to cover at least a back surface of the semiconductor element,

a sidewall surface of said semiconductor element being exposed at a sidewall surface of said semiconductor device.

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133. (New) A semiconductor device as claimed in claim 132, wherein a sidewall surface of said first resin layer and a sidewall surface of said second resin layer form a flush surface with said sidewall surface of said semiconductor element.

134. (New) The semiconductor device as claimed in claim 109, wherein said resin layer is a compression-molded resin layer.

135. (New) The semiconductor device as claimed in claim 111, wherein said resin layer is a compression-molded resin layer.